

U.S. Patent Application Serial No. 09/901,044
Response dated November 6, 2003
Reply to OA of August 1, 2003

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended): A dry surface treating apparatus comprising,
~~within~~ a treating chamber further comprising,
a surface-treating material supply section and
a tubular barrel having a porous peripheral surface for accommodating a work piece, ~~to~~
~~treat for treating~~ a surface of the work piece while rotating, said tubular barrel being horizontally
arranged about a horizontal rotational axis,

the surface-treating material supply section being provided outside of the tubular barrel so
as to allow surface-treating material to pass into and out of the tubular barrel through the porous
peripheral surface,

wherein said tubular barrel has a slide stop for stopping a slide of the accommodated work
piece along an inner peripheral surface of said tubular barrel due to rotation of said tubular barrel.

Claim 2 (Previously presented): An apparatus according to claim 1, wherein said tubular
barrel has a sectional shape with respect to the rotational axis having at least one corner at an
internal angle of 30° to 100°, said corner being provided as said slide stop.

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Claim 3 (Previously presented): An apparatus according to claim 2, wherein said tubular barrel has a sectional polygonal shape with respect to the rotational axis having at least three corners at internal angles of 30° to 100°, said corners being provided as said slide stops.

Claim 4 (Previously presented): An apparatus according to claim 3, wherein said tubular barrel has a sectional shape of a regular triangle with respect to the rotational axis.

Claim 5 (Previously presented): An apparatus according to claim 3, wherein said tubular barrel has a sectional shape of a square with respect to the rotational axis.

Claim 6 (Previously presented): An apparatus according to claim 2, wherein said tubular barrel has a sectional shape of a rhombus with respect to the rotational axis.

Claim 7 (Previously presented): An apparatus according to claim 1, wherein said tubular barrel has a sectional shape of a convex curve in a part of said sectional shape with respect to the rotational axis.

Claim 8 (Previously presented): An apparatus according to claim 7, wherein said tubular barrel has a sectional shape of an ellipse or convex lens with respect to the rotational axis.

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Claim 9 (Original): An apparatus according to claim 1, wherein a protrusion is provided on an inner peripheral surface of said tubular barrel, said protrusion being made as said slide stop.

Claim 10 (Previously presented): An apparatus according to claim 9, wherein said protrusion is provided at an internal angle of 30° to 100°.

Claim 11 (Previously presented): An apparatus according to claim 9, wherein said protrusion is in any of a comb shape, a plate shape and a rod shape.

Claim 12 (Previously presented): An apparatus according to claim 9, wherein a number of said protrusion is one to seven.

Claim 13 (Previously presented): An apparatus according to claim 1, wherein said tubular barrel has an interior comprising a plurality of partitioned accommodating sections formed by one or more partitioning members provided perpendicular to the rotational axis of said tubular barrel.

Claim 14 (Previously presented): An apparatus according to claim 13, wherein said partitioning member is formed by a linear member.

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Claim 15 (Previously presented): An apparatus according to claim 1, wherein said tubular barrel has an interior comprising a plurality of partitioned chambers formed by one or more partitions parallel to the rotational axis of said tubular barrel.

Claim 16 (Previously presented): An apparatus according to claim 15, wherein said partitioned chamber is in a sectional shape with respect to the rotational axis having at least one corner at an internal angle of 30° to 100°, said corner being provided as said slide stop.

Claim 17 (Previously presented): An apparatus according to claim 13, wherein a work piece is accommodated in each of said partitioned accommodating sections.

Claim 18 (Previously presented): An apparatus according to claim 1, wherein said porous peripheral surface is a mesh shape peripheral surface.

Claim 19 (Previously presented): An apparatus according to claim 1, wherein said porous peripheral surface is a slit shape peripheral surface.

Claim 20 (Previously presented): An apparatus according to claim 1, wherein a plurality of tubular barrels is annularly supported at positions circumferentially outward of the rotational axis of a support member rotatable about the rotational axis in a horizontal direction.

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Claim 21 (Original): An apparatus according to claim 1, wherein said dry surface treating apparatus is a deposition apparatus.

Claim 22 (Original): An apparatus according to claim 1, wherein said dry surface treating apparatus is a blast treating apparatus.

Claim 23 (Previously presented): A dry surface treating method for treating a work piece, comprising treating said work piece by using said dry surface treating apparatus according to claim 1.

Claim 24 (Previously presented): A dry surface treating method according to claim 23, wherein said work piece is a rare earth metal-based permanent magnet in a plate or bow shape.

Claim 25 (Previously presented): A dry surface treating method according to claim 23, wherein said work piece is treated while having its surfaces inverted at said slide stop as a fulcrum.

Claim 26 (Previously presented): A rare earth metal-based permanent magnet comprising a surface treated by said dry surface treating method according to claim 23.

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Claim 27 (Canceled)

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Claim 28 (Previously presented): An apparatus according to claim 15, wherein a work
piece is accommodated in each of said partitioned chambers.